



## King's Research Portal

DOI:

[10.1177/0968344514559873](https://doi.org/10.1177/0968344514559873)

*Document Version*

Peer reviewed version

[Link to publication record in King's Research Portal](#)

*Citation for published version (APA):*

Fox-Godden, A. E. (2016). Beyond the Western Front: The Practice of Inter-Theatre Learning in the British Army during the First World War. *War in History*, 23(2), 190-209. <https://doi.org/10.1177/0968344514559873>

### **Citing this paper**

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

### **General rights**

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

### **Take down policy**

If you believe that this document breaches copyright please contact [librarypure@kcl.ac.uk](mailto:librarypure@kcl.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.

## **Beyond the Western Front: The practice of inter-theatre learning in the British army during the First World War**

In his Final Despatch on 28 June 1919, General Sir Edmund Allenby (Commander-in-Chief, Egyptian Expeditionary Force (EEF)) recalled how the course of the Palestine campaign ‘followed closely the course of events’ on the Western Front:

The defence of the Suez Canal, corresponded to the first check of the enemy’s onrush in France and Belgium; the period of the advance through the Sinai desert, to the general development of the Allied strength and the building up of a secure battle line along the whole front; the 1917 advance, to the period of increased Allied pressure which exhausted the enemy’s reserves; whilst the last advance coincided with the final Allied counter-offensive.<sup>1</sup>

For Allenby, although the events in Palestine may not have materially assisted in the defeat of Germany, the EEF’s actions did not occur in isolation from the main theatre of operations; instead, they were intimately connected. There has been ample scholarship on the Western Front and the political dimension of the subsidiary theatres, yet very little has focused on the military connections among the various theatres.<sup>2</sup> This is particularly true with scholarship on the British army’s ‘learning curve’ or learning process during the First World War.

This idea of a ‘learning curve’ is used to describe the evolution of the army from a small, colonial police force to a mass army capable of waging sophisticated operations. Historians associated with the ‘learning curve’ concept have used the term to convey the belief that the army learned from its mistakes at the operational and tactical levels of war, attaining a high level of proficiency that manifested itself during the Hundred Days offensive of 1918. Although this concept is useful in illuminating our understanding of how the army transformed, it remains both Anglocentric and Western Front-focused. It is rarely applied to learning that took place within the subsidiary theatres, resulting in a well-marked tendency to disregard these theatres from the ‘learning curve’ narrative. This risks a myopic focus on the Western Front, leading to an incomplete understanding of the army and, arguably, its military operations in the early twentieth century. Moreover, the concept’s inherent bias of focusing on the end result – combat and operational effectiveness – rather than the process for learning obfuscates our understanding of intra-army learning itself. This bias has dominated academic scholarship for the last thirty years with a focus on tactics, weapons technologies, command, and

---

<sup>1</sup> C. Falls, *Official History of the War: Military Operations, Egypt and Palestine 1917, Part II* (2 vols., London, 1930) II, pp.632-3.

<sup>2</sup> These subsidiary theatres included East Africa (1914-1918), Gallipoli (1915-1916), Italy (1915-1918), Mesopotamia (1914-1918), Salonika (1914-1918), and Sinai and Palestine (1915-1918). For consideration of the political dimensions of these theatres, see D. Dutton, *The Politics of Diplomacy: Britain, France, and the Balkans in the First World War* (London, 1997); K. Neilson, “‘For Diplomatic, Economic, Strategic, and Telegraphic Reasons’: British Imperial Defence, the Middle East and India, 1914-1918”, in G. Kennedy and K. Neilson, eds., *Far Flung Lines: Essays on Imperial Defence in Honour of Donald Mackenzie Schurman* (London, 1997), pp.103-23; D. French, *The Strategy of the Lloyd George Coalition, 1916-1918* (Oxford, 1995).

battle studies, almost all of which are exclusively concerned with the Western Front.<sup>3</sup> Although both Dan Todman and Jonathan Boff have cautioned against a linear view of learning in the war,<sup>4</sup> their respective research revealing a far more complicated process, it is only in recent years that historians, such as Robert Foley and Jim Beach, have started to look beneath the ‘learning curve’ to consider the army’s methods for learning.<sup>5</sup> This is a welcome development, but there is still much work to be done on how the army, as an institution, learned from its experiences. If we fail to understand how the army learned, including the techniques it used, then we cannot truly understand how the army changed during the war.

Modern organisational theorists have been particularly interested in this relationship between learning and change, predicated by the relationship between individual and organisational learning.<sup>6</sup> This debate has produced a dichotomy with learning viewed as either an individual function or a collective function. In the case of the former, learning is the sum of what individuals learn, giving rise to the belief that organisations can learn ‘independent of any specific individual, but not independent of all individuals’.<sup>7</sup> Conversely, in the case of the latter, learning is a reflection of an organisation’s collective rules, procedures, and beliefs, rather than the sum of each member’s learning.<sup>8</sup> Despite these differences in opinion, a consensus exists among scholars that learning occurs through and amongst people and that knowledge acquired by individual learning needs to be transferred to others for the organisation to benefit. The tension between these two types of learning fuels debate as to whether organisations are capable of learning. These notions are fundamental to the growing literature on military innovation and adaptation.<sup>9</sup> The field of military innovation studies can be seen as a direct subset of organisational learning. As Robert Foley notes, while management theorists developed ideas about ‘learning organisations’ and ‘knowledge management’, military historians wrote about ‘innovation’ and, more recently,

---

<sup>3</sup> For tactics, see B. Rawling, *Surviving Trench Warfare: Technology and the Canadian Corps, 1914-1918* (Toronto, 1992); P. Griffith, *Battle Tactics of the Western Front: The British Army’s Art of Attack, 1916-1918* (London, 1994). For weapons technologies, see S. Marble, *British Artillery on the Western Front in the First World War* (Aldershot, 2013). For command, see R. Prior and T. Wilson, *Command on the Western Front: The Military Career of Sir Henry Rawlinson 1914-1918* (Barnsley, 1992); A. Simpson, *Directing Operations: British Corps Command on the Western Front* (Stroud, 2006); G. Sheffield, *The Chief: Douglas Haig and the British Army* (London, 2011). For battle studies, see G. Sheffield, *The Somme* (London, 2006); R. Lee, *The Battle of Fromelles 1916* (Newport NSW, 2010).

<sup>4</sup> D. Todman, ‘The Grand Lamasery Revisited: General Headquarters on the Western Front, 1914-1918’, in D. Todman and G. Sheffield, eds., *Command and Control on the Western Front: The British Army’s Experience 1914-18* (Stroud, 2004), pp.64-5; J. Boff, *Winning and Losing on the Western Front: The British Third Army and the Defeat of Germany in 1918* (Cambridge, 2012), pp.248-49.

<sup>5</sup> R. Foley, ‘Dumb donkeys or cunning foxes? Learning in the British and German armies during the Great War’, *International Affairs*, XC (2014), pp.279-98; J. Beach, ‘Issued by the General Staff: Doctrine Writing at British GHQ, 1917-1918’, *War in History*, XIX (2012), pp.464-49.

<sup>6</sup> See Chester Barnard, *The Functions of the Executive* (Cambridge MA, 1968); Peter Senge, *The Fifth Discipline: The Art and Practice of the Learning Organisation* (New York, 1990); E. Schein, *Organizational Culture and Leadership* (San Francisco, 1997).

<sup>7</sup> D. H. Kim, ‘The Link between Organizational and Individual Learning’, *Sloane Management Review*, Fall (1993), p.37.

<sup>8</sup> C. M. Fiol and M. A. Lyles, ‘Organizational Learning’, *Academic Management Review*, X (1985), p.804; B. Levitt and J. G. March, ‘Organizational Learning’, *Annual Review of Sociology*, XIV (1988), p.320.

<sup>9</sup> For literature review of military innovation studies, see A. Grissom, ‘The future of military innovation studies’, *Journal of Strategic Studies*, XXIX (2006), pp.905-34. For military adaptation, see T. Farrell, ‘Improving in War: Military Adaptation and the British in Helmand Province, Afghanistan, 2006-2009’, *Journal of Strategic Studies*, XXXIII (2010), pp.567-94; S. Catignani, ‘“Getting COIN” at the Tactical Level in Afghanistan: Reassessing Counter-Insurgency Adaptation in the British Army’, *Journal of Strategic Studies*, XXXV (2012), pp.513-39.

‘adaptation’.<sup>10</sup> However, scholars have only recently begun to merge these two fields.<sup>11</sup> Foley and Sergio Catignani represent the latest attempt to merge the two fields with their respective examinations of the learning culture of the British army during the First World War and in the present day.<sup>12</sup> Both highlight the army’s reliance on informal learning methods owing to an organisational culture that centres on pragmatism and a dislike of formal doctrine. Although they acknowledge the army’s utilisation of formal learning systems, both argue that learning and knowledge sharing takes place through predominantly informal, individualised methods.

Building on Foley and Catignani’s recent work, this article will consider the army’s process for learning during the First World War through an examination of knowledge sharing among its operational theatres. This examination is useful for three reasons. First, it moves beyond the standard Western Front narrative of First World War historiography, taking a more holistic view of the army and a global perspective of the war. In this respect, it responds to calls from Hew Strachan and William Philpott, whilst also complementing recent inter-theatre research by Mark Harrison and Brian Hall.<sup>13</sup> Learning was not a phenomenon limited to the British Expeditionary Force (BEF) in France and Flanders; rather, it was an institutional and individual process that occurred both on and beyond the Western Front. Secondly, and more broadly, it responds to an identified gap within military innovation studies by focusing on inter-theatre learning. As Theo Farrell has argued, to understand the ‘specific modalities’ of British military learning, it is important to understand learning that occurs at an institutional level, across theatres, and from other militaries.<sup>14</sup> Rather than focusing on the outcome of learning, this article investigates the process and methods by which the army disseminated knowledge across its operational theatres. Finally, it gives equal weighting to the army’s formal and informal methods for learning. Studies touching on the army’s learning process in the First World War tend to concern themselves with formal learning methods, owing to the proliferation of institutionally sanctioned documents, such as after-action reports, lessons learned documentation, and doctrinal pamphlets. The army was required to develop a number of formal learning methods during the war. These particular methods, such as military publications, allowed for the dissemination of explicit knowledge across the army’s various expeditionary forces. In organisational learning terms, publications are a ‘people-to-documents’ method. They represent the formal process by which information is extracted from an individual or unit, made independent, and reused for various purposes. This particular approach, known as ‘codification’, gives individuals access to organised knowledge

---

<sup>10</sup> R. Foley, ‘Dumb donkeys’, p.280.

<sup>11</sup> See R. D. Downie, *Learning from Conflict: The U. S. Military in Vietnam, El Salvador, and the Drug War* (Westport CT, 1998); J. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (London, 2005); P. O’Toole and S. Talbot, ‘Fighting for Knowledge: Developing Learning Systems in the Australian Army’, *Armed Forces & Society*, XXXVII (2011), pp.42-67; R. T. Foley, H. McCartney and S. Griffin, “‘Transforming in contact’: learning the lessons of modern war”, *International Affairs*, LXXXVII (2011), pp.253-70.

<sup>12</sup> Foley, ‘Dumb donkeys’, pp.279-98; S. Catignani, ‘Coping with knowledge: Organizational Learning in the British Army?’, *Journal for Strategic Studies*, XXXVII (2014), pp.30-64.

<sup>13</sup> H. Strachan, ‘The First World War as a Global War’, *First World War Studies*, I (2010), pp.3-14; W. Philpott, ‘Beyond the ‘Learning Curve’: The British Army’s Military Transformation in the First World War’, <https://www.rusi.org/analysis/commentary/ref:C4AF97CF94AC8B/#.U33lrV4k9g0> (accessed 22 May 2014); M. Harrison, *The Medical War: British Military Medicine in the First World War* (Oxford, 2010); B. N. Hall, ‘Technological Adaptation in a Global Conflict: The British Army and Communications beyond the Western Front, 1914-1918’, *Journal of Military History*, LXXVIII (2014), pp.37-71.

<sup>14</sup> Farrell, ‘Improving in War’, pp.591-2.

without having to go direct to the originator.<sup>15</sup> However, the army did not solely pursue a codification strategy. It was far from ignorant of the importance of ‘people-to-people’ methods. These particular methods promote knowledge sharing between individuals through mentoring, secondments, or by facilitating social networks. The army utilised a number of these methods throughout the war, partly in response to its existing learning culture, but also due to the increasingly civilian make up of its organisation. Owing to the proximity of the enemy and the inability to disengage fully from the battlefield, experiential or ‘on the job’ learning was just as necessary as more explicit methods. The tendency to separate these methods, rather than viewing them as part of a complex whole, manifests in a disintegrative view of the military organisation itself. For organisational learning to take place, there needs to be an effective relationship between formal and informal methods.

This article addresses two questions: first, how effective were the British army’s knowledge sharing methods between operational theatres; and second, how significant were informal and formal methods to the army’s learning process? To answer these questions, this article first provides an overview of the army’s approaches to learning before discussing three of the army’s learning methods: military publications, training schools, and individuals. This article suggests that, in response to its rapid expansion and increased global commitments, the army adopted increasingly bureaucratic methods alongside its traditional, ad hoc approach when sharing knowledge across tactical and geographic boundaries.

## **I. Publications**

The British army entered the First World War as an institution that prided itself on adaptation and devolved decision-making.<sup>16</sup> Required to mount expeditions in different parts of the world, the army’s ethos was one of flexibility. The sheer diversity of conditions that forces could realistically face meant that tactics relevant for one campaign could be markedly different for the next. As General Sir Neville Lyttelton, the first Chief of the General Staff, remarked:

Few people have seen two battles in succession in such startling contrast as Omdurman and Colenso. In the first, 50,000 fanatics streamed across the open regardless of cover to certain death, while at Colenso I never saw a Boer all day until the battle was over, and it was our men who were the victims.<sup>17</sup>

This ethos of flexibility encouraged a highly individualised, rather than a ‘one size fits all’, approach to learning. The nascent General Staff could do little to challenge the primacy of the regiment or curb the influence of individual generals, often resulting in a proliferation of different tactical methods.<sup>18</sup>

---

<sup>15</sup> M. T. Hansen, N. Nohria and T. Tierney, ‘What’s Your Strategy for Managing Knowledge?’, *Harvard Business Review*, Mar-Apr 1999, p.2.

<sup>16</sup> D. French, *Military Identities: The Regimental System, the British Army, and the British People, c. 1870-2000* (Oxford, 2005); S. Jones, *From Boer War to World War: Tactical Reform of the British Army, 1902-1914* (Norman OK, 2012).

<sup>17</sup> N. Lyttelton, *Eighty Years: Soldiering, Politics, Games* (London, 1927), p.212.

<sup>18</sup> H. Strachan, ‘The British Army, its General Staff and the Continental Commitment, 1904-1914’, in D. French and B. Holden Reid, eds., *The British General Staff: Reform and Innovation, c. 1890-1939* (London, 2002), p.90; M. A. Ramsey, *Command and Cohesion: The Citizen Soldiers and Minor Tactics in the British Army*,

The experience of the South African War in particular had shocked the army resulting in a long period of organisational reform and introspective lesson learning.<sup>19</sup> This led to a change in its tactics, weaponry, command structure, and training, but the learning process itself was far from straightforward.<sup>20</sup> Individual units still often retained the knowledge they derived from operational experience as a form of oral tradition, resulting in lessons and experience failing to influence the army as a whole.<sup>21</sup> Although the pre-war army had formal learning methods, such as the military academies and service journals, they were not designed to reach everybody at once. The small size of the army and the relative homogeneity of the officer corps made a personalised approach to learning feasible if not wholly desirable. However, the army's rapid expansion during the First World War and its deployment to diverse operational theatres challenged this personalised approach. The army had to develop a series of organised, formal learning methods to ensure that its forces were aware of the latest developments taking place around the globe and not just on the Western Front. It became apparent that the army could no longer rely on a personalised approach to learning. The growing scale, size, and intensity of the war compelled it to adopt a bureaucratic approach in its dissemination of knowledge.

One of these bureaucratic methods for knowledge sharing within the army was through publications. Although the army's methods for learning have been neglected in the historiography, the writing and production of the Stationery Service (SS) series of publications is an exception to this rule and has been a subject of interest for scholars.<sup>22</sup> The first SS pamphlet, *SS23 Preliminary Deductions, for Instruction, from Recent Engagements* was issued in November 1915. Prior to this, publications were printed by the War Office's Central Distribution Section (CDS). The earliest known CDS pamphlet, *CDS2 Notes from the Front*, was published in December 1914. These publications represented the British army's standard operating procedure. They were an explicit form of knowledge in that they were portable and could be readily transmitted to different parts of the military organisation. For the high command, these publications were 'merely amplifications' of the army's pre-war manuals, produced to 'meet the varying requirements' of the war.<sup>23</sup> These 'amplifications' covered a myriad of topics, ranging from the training and employment of bombers to lessons drawn from specific operations. The use and subsequent adaptation of the SS series went beyond the Western Front and was widespread throughout the army's operational theatres.

---

1870-1918 (Westport CT, 2002), p.92. For debates around influence of General Staff and primacy of regiment, see M. Samuels, *Command or Control? Command, Training and Tactics in British and German Armies 1888-1918* (London, 1995); T. Travers, *The Killing Ground: The British Army, the Western Front and the Emergence of Modern Warfare 1900-1918* (Barnsley, 2004); Jones, *From Boer War*, pp.54-55.

<sup>19</sup> See T. Bowman and M. Connelly, *The Edwardian Army: Recruiting, Training, and Deploying the British Army, 1902-1914* (Oxford, 2012); H. Strachan, 'The Boer War and its Impact on the British Army, 1902-1914', in P. B. Boyden, A. J. Guy and M. Harding, eds., *Ashes and Blood: The British Army in South Africa 1795-1914* (London, 1999), pp.85-98; J. Gooch, 'Britain and the Boer War', in G. J. Andreopolous and H. E. Selesky, eds., *The Aftermath of Defeat: Societies, Armed Forces, and the Challenge of Recovery* (New Haven CT, 1994), pp.40-58.

<sup>20</sup> Gooch, 'The Boer War', p.57; Jones, *From Boer War*, p.213.

<sup>21</sup> T. R. Moreman, *The Army in India and the Development of Frontier Warfare, 1849-1947* (Basingstoke, 1998), p.36.

<sup>22</sup> See Beach, 'General Staff', pp.464-491.

<sup>23</sup> Australian War Memorial (AWM), AWM25 947/76, Infantry Training France 1917, O.B./165, 8 May 1917.

Although there was provision for a printing depot in the field as part of the BEF's mobilisation plans, the War Office's CDS held responsibility for the initial production of military publications. Once printed, these CDS publications were despatched to France for distribution via the Army Printing and Stationery Service (APSS). In addition to Western Front demands for general stationery and specific publications, both the CDS and APSS also received ad hoc requests from the General Headquarters (GHQ) of the various expeditionary forces who desired the latest literature from France and Flanders.<sup>24</sup> One of General Sir William Birdwood's first actions as commander of the Australian and New Zealand Army Corps, for example, was to ask for 'copies of any instructional pamphlets you may have on points of training... on experience gained up to date in the war'.<sup>25</sup> This was followed up with a subsequent demand for 'Notes from the Front vols one and two 1500 copies of each' and 'three hundred copies each of Lecture by [Brigadier-General Robert] Montgomery, *Notes on Artillery in the Present War*, and *Notes on the Use of Plane Tables with Artillery*'.<sup>26</sup> The turnaround time for these demands was surprisingly quick. Birdwood received his publications after less than a week,<sup>27</sup> while Brigadier-General Webb Gillman (BGS British Salonika Force (BSF)) referenced publications such as *Memorandum relating to the experience gained from the Verdun actions* in a BSF training memorandum in early July 1916 – less than two months after its publication in France.<sup>28</sup>

This continual stream of individual demands placed strain on a system that had been established for a small field force. Although the APSS had printing depots in Salonika and Egypt by mid-1916, the initial distribution of Western Front SS pamphlets was still conducted on an ad hoc basis.<sup>29</sup> Unsurprisingly, this practice soon became unworkable. However, the army continued to operate in an ad hoc manner until early 1917 when the distribution process was finally overhauled. Following a request for recent SS pamphlets from the Mesopotamia and Salonika theatres in February 1917, GHQ BEF instructed the APSS to issue three copies of all publications forthwith to 'G.O.Cs Egypt, Salonika, Mesopotamia [and] C.in.C. India'.<sup>30</sup> Any further copies of these pamphlets were to be produced locally in-theatre. The army's decision to standardise distribution marked the transition from 'pulled' transfer – where theatres requested publications that would be of use to them – to 'pushed' transfer – where all publications were sent out to the various theatres, irrespective of need or relevance. This decision ran counter to the army's pre-war ethos, which had centred on a highly individualised and decentralised approach to learning. The pushed transfer of publications aimed to reach as many individuals as possible. However, this decision did not represent a complete departure from its pre-war ethos. It still remained up to each expeditionary force's GHQ to judge whether or not to circulate the material. This suggests that there was considerable organisational flexibility that allowed for independent learning in the subsidiary theatres.

---

<sup>24</sup> The National Archives (TNA), WO 95/81, Director of Printing and Stationery Service War Diary, 24 May 1916; TNA WO 95/4362, Egyptian Expeditionary Force (EEF) GHQ War diary, 26 April 1916.

<sup>25</sup> AWM, 3DRL/3376 11/12, Papers of Lord Birdwood, Telegram, Delhi to War Office, 2 December 1914.

<sup>26</sup> AWM, 3DRL/3376 11/12, Papers of Lord Birdwood, Telegram, Delhi to War Office, 24 December 1914. Brigadier-General Montgomery was BGS to IV Corps.

<sup>27</sup> AWM, 3DRL/3376 11/12, Papers of Lord Birdwood, Telegram, War Office to Birdwood, 6 December 1914.

<sup>28</sup> TNA, WO 95/4756, BSF GHQ War Diary, Memo to GOCs XII and XVI Corps, 6 July 1916.

<sup>29</sup> TNA, WO 95/81, Director of Printing and Stationery Service War Diary, 19 June 1916.

<sup>30</sup> TNA, WO 95/81, Director of Printing and Stationery Service War Diary, 14 February 1917. Instructions for the formal dissemination of SS pamphlets to the Italian Expeditionary Force (IEF) were agreed on 13 January 1918.

As the various operational theatres grew in size, Base Supply Depots were established to satisfy printing needs in-theatre. This permitted them to produce their own publications based on local experience. Examples of this include the Italian Expeditionary Force's (IEF) *SS652 I.E.F. Traffic Orders* and a subsequent publication on hill training, along with the EEF's *Notes on the Employment of Lewis Guns in the Desert*.<sup>31</sup> Despite the production of these theatre-specific publications, there was still considerable appetite for Western Front literature.<sup>32</sup> However, the question of relevance was never far from the minds of the high command. Major-General Guy Dawnay, a senior staff officer in both Palestine and on the Western Front, noted the 'well marked tendency to apply the lessons of experience indiscriminately',<sup>33</sup> while Major-General Arthur McNamara criticised commanders at Gallipoli for trying to 'apply the methods applicable to the war in France, to which they had little relation'.<sup>34</sup> Although the army favoured principles over prescription, this attitude echoed the pre-war reluctance of applying the tactics and lessons from one campaign to another.<sup>35</sup>

A number of Western Front publications were broad enough to cater for most theatres, such as *SS135 Training and Employment of Divisions* and *SS143 Instructions of the Training of Platoons for Offensive Action*, and provided the foundation for infantry training in the subsidiary theatres. The BSF Infantry School listed both *SS135* and *SS143* as required reading for officers undertaking the course,<sup>36</sup> while corps and divisional commanders' conferences in the IEF drew attention to these same publications for the purposes of patrolling and hill warfare in April 1918.<sup>37</sup> However, the majority of pamphlets were concerned with battle conditions on the Western Front. This required commanders and staffs of the various expeditionary forces to modify these pamphlets for use in-theatre. For example, two pages of notes by Major-General Sydenham Smith (Major General Royal Artillery (MGRA) EEF) accompanied the distribution of *SS139 Notes on Artillery*, offering guidance on the use and applicability of this particular publication in Palestine. In his consideration, Smith noted that 'the whole tenour [sic] of this book applies to conditions of trench warfare such as appertain in France... we must therefore be careful to adapt the principles to the nature of such defences as confront us from time to time'.<sup>38</sup> The adaptation of these publications was not just limited to the higher levels of command. With tactical publications such as *SS143*, divisions had latitude to interpret and adapt them to their local situation.<sup>39</sup> Whereas some divisional commanders in the subsidiary theatres, such as John Shea (GOC 60th (2/2nd) London

<sup>31</sup> TNA, WO 95/4203, IEF Director of Supply and Transport War Diary, 21 March 1918; TNA, WO 95/4229, 23rd Division General Staff (GS) War Diary, Notes from Corps Commander's conference, 24 March 1918; TNA, WO 95/4366, EEF GHQ War Diary, Lynden-Bell to War Office, 9 November 1916.

<sup>32</sup> See C. S. Forrest, 'The 52nd (Lowland) Division in the Great War', Unpublished PhD Thesis, University of Salford, 2010, pp.168-70.

<sup>33</sup> Imperial War Museum (IWM), 69/21/1, Papers of Major-General Sir G. P. Dawnay, Draft Lecture on Dardanelles and Palestine, n.d.

<sup>34</sup> Liddell Hart Centre for Military Archives (LHCMA), 4/4, Papers of General Sir W. M. StG. Kirke, Notes by Major General A. E. McNamara on training in peace time and in war, May 1932.

<sup>35</sup> Moreman, *The Army in India*, pp.38-41; French, *Military Identities*, p.65.

<sup>36</sup> TNA, WO 95/4946, BSF Infantry Training School War Diary, Training syllabus, 3 February 1918.

<sup>37</sup> TNA, WO 95/4229, 23rd Division GS War Diary, Notes from Corps Commander's conference, 24 March 1918; TNA, WO 95/4229, 23rd Division GS War Diary, Proceedings of a conference held at divisional headquarters, 28 April 1918.

<sup>38</sup> TNA, WO 95/4367, EEF GHQ War Diary, Notes by MGRA on the two pamphlets *SS139/3* and *SS139/4*, 4 May 1917.

<sup>39</sup> This was in contrast to the Western Front where GHQ BEF was determined that *SS143*'s platoon structure should be 'adopted throughout all Armies in France'. See GHQ, *SS144 The Normal Formation for the Attack*, 1917.



Division) thought that the new platoon structure was ‘absolutely correct’,<sup>40</sup> the 74th (Yeomanry) Division modified *SS143* to meet its own needs and experiences. In August 1917, battalions of that division reorganised as per *SS143*. However, instead of including a section of rifle grenadiers, a sniper section took its place.<sup>41</sup> The type of warfare that confronted the division meant that the enemy was rarely within assaulting distance, thus rendering the rifle grenade – a trench warfare munition – somewhat superfluous. In contrast, a sniper section offered a useful way of engaging the enemy at long range.

The decision to reorganise based on Western Front principles suggests that expeditionary forces, such as the EEF, did not exist in isolation from the wider tactical or indeed administrative developments taking place in other theatres.<sup>42</sup> Although adaptation was encouraged, a clear attempt to promote uniformity endured across the army’s expeditionary forces. The BSF, for example, ordered its formations to reorganise based on *SS143* to ‘assimilate the organisation of battalions in this Force with that of battalions in the British armies in France and to ensure the necessary degree of uniformity of training in battalions’.<sup>43</sup> This serves to highlight the conflict between ensuring a systematic approach while simultaneously encouraging devolved decision-making. Expeditionary forces were not compelled to adopt Western Front practice, yet, due to manpower demands, it was ill-advised to prepare for just one type of warfare. The possibility of transferring to another theatre of operations at relatively short notice meant that formations usually had to prepare for two types of warfare: offensive operations in their current theatre and warfare as conducted on the Western Front.<sup>44</sup> In the case of 52nd (Lowland) Division, for example, its training in Western Front methods enabled it to make an effective contribution to the military operations of the BEF.<sup>45</sup>

## II. Training schools

Although they were a learning method in their own right, military publications also provided the basis for the army’s training school system. Indeed, the dissemination of a publication was not always enough. Recalling preparations for the second battle of Gaza, one soldier in the 5th Highland Light Infantry recalled that ‘pamphlets on the attack, written for trench warfare in France, were liberally issued. One’s brain became terribly confused’.<sup>46</sup> Although the ‘pushed’ distribution method was working, this soldier’s account suggests that pamphlets were not always read or understood. No soldier was ever expected to read every training pamphlet

---

<sup>40</sup> TNA, WO 95/4660, 60th Division GS War Diary, Memorandum on Lessons Learned, 13 November 1917.

<sup>41</sup> C. H. Dudley Ward, *The 74th (Yeomanry) Division in Syria and France* (London, 1922), p.67.

<sup>42</sup> The decision to despatch an expeditionary force to Italy required the hurried establishment of a new British transportation directorate prior to the arrival of British forces. Owing to the intimate link between the Western and Italian fronts, it was necessary that the directorate ‘followed the lines of organisation for the BEF’. The majority of the manpower required for the directorate was drawn from ‘officers and men that could be spared’ from the BEF’s Transportation Directorate. See Institution of Royal Engineers, *History of the Corps of Royal Engineers* (8 vols., Chatham, 2008) V, pp.691-2.

<sup>43</sup> TNA, WO 95/4757, BSF GHQ War Diary, Memo to GOCs XII and XVI Corps, 5 June 1917.

<sup>44</sup> The 27th Division, for example, had little more than two weeks between notification and embarkation for Salonika. It received information on 31 October 1915 that it was to entrain for Salonika and began its subsequent embarkation on 17 November 1915. TNA, WO 95/2255/2, 27th Division A&Q War Diary, 31 October 1915.

<sup>45</sup> Forrest, ‘52nd (Lowland) Division’, p.357.

<sup>46</sup> F. L. Morrison, *The Fifth Battalion, Highland Light Infantry in the War, 1914-18* (Glasgow, 1921), p.147.

issued. Indeed, the pamphlets read would have depended on that soldier's rank or role. However, in some cases, these pamphlets still required interpretation and to be put into practice. Training – both in schools and in units – provided that method of interpretation.

Prior to the creation of the BEF's Training Directorate in January 1917, the establishment of training schools relied on the initiative of individual commanders.<sup>47</sup> By the winter of 1916-17, a number of schools at army, corps and division existed, but had little uniformity as to how they ran or the methods taught.<sup>48</sup> The establishment of the Training Directorate offered a way of enforcing 'uniformity of doctrine', as well as standardising the teaching of that doctrine. The publication of *SS152 Instructions for the Training of the British Armies in France* encapsulated this drive for uniformity. Published as a provisional document in June 1917,<sup>49</sup> *SS152* set out the army's 'general policy of training' and the system it would use to ensure 'uniformity of doctrine'. Its publication led to a complete overhaul and standardisation of the schools system within the BEF. As Alastair Geddes has argued, the reduction of the number of schools limited the opportunity for different training creeds.<sup>50</sup> This made the system more manageable. To compliment the standardised school system, *SS152* was highly prescriptive regarding the syllabus for each school, including the number of students in each cohort and the types of publications to be used.<sup>51</sup>

Devised for use in the BEF, *SS152*'s dissemination to the other expeditionary forces meant that it also provided the basis for schools in the subsidiary theatres. Its use was notable in the BSF with the establishment of GHQ schools for infantry, artillery, signal, gas, and Lewis and Vickers guns.<sup>52</sup> Surviving records for the BSF's Lewis and Vickers Gun school outline the development of a new programme of training, prepared 'on the lines laid down in "Instructions for the Training of the British Armies in France" with reference to the latest literature from France and Grantham'.<sup>53</sup> However, as with military publications, the training syllabus needed to be made relevant to local conditions. The BSF Lewis and Vickers Gun school, therefore, eliminated certain aspects of the syllabus prescribed by *SS152*, such as revolver drill and 'warfare of highly organised defences'.<sup>54</sup> This flexible approach was also evident in the BSF Infantry school. The core pamphlets mirrored those used in France, including *SS135*, *SS143*, and *SS185 Assault Training*, yet responsibility was placed on the Commandant and his instructors to ensure that the course was relevant to conditions in Salonika.<sup>55</sup> This tendency towards decentralisation suggests that the centre of the organisation was positively delegating responsibility to the

---

<sup>47</sup> For discussion on establishment of training directorate and role of GHQ, see A. Geddes, 'Solly-Flood, GHQ, and Tactical Training in the BEF, 1916-1918', MA dissertation, University of Birmingham, 2007; D. Molineux, 'The Effect of Platoon Structure on Tactical Development in the BEF: June to November 1918', MA dissertation, University of Birmingham, 2009.

<sup>48</sup> TNA, WO 256/15, Field Marshal Sir Douglas Haig Diaries, Summary of Schools of Training for the British Expeditionary Force during Winter 1916-17, n.d.

<sup>49</sup> A revised version of *SS152* was published in January 1918.

<sup>50</sup> Geddes, 'Solly-Flood', p.20.

<sup>51</sup> Op. cit., p.21.

<sup>52</sup> C. Falls, *Official History of the War: Military Operations, Macedonia* (2 vols., London, 1933) II, p.57.

<sup>53</sup> TNA, WO 95/4946, BSF Lewis and Vickers Gun School War Diary, 24 June 1918. Grantham was home to the Machine Gun Training Centre and the Machine Gun School.

<sup>54</sup> TNA, WO 95/4946, BSF Lewis and Vickers Gun School War Diary, 24 June 1918.

<sup>55</sup> TNA, WO 95/4946, BSF Infantry School War Diary, Appendix 7, 3 February 1918.

periphery. This policy of adaptation and decentralisation is also evident within the EEF. In a letter to the force's corps commanders, Guy Dawnay wrote that:

The various pamphlets, published on training, cannot be accepted as containing the final word so far as the preparations for operations in this country are concerned. It is considered that the experience gained on the subject, which may have called for modifications and variations in the pamphlets referred to, are worth... collating and placing on record for future guidance.<sup>56</sup>

Although syllabi were adapted to suit local training needs, training in Western Front warfare was not neglected. Within the EEF, for example, a specialist branch of the Imperial School of Instruction was established for the sole purpose of training in trench warfare. Governed by *SSI43*, the syllabus included the 'combined training and tactical handling of Stokes Guns, Lewis Guns and bombers'.<sup>57</sup> The EEF also established a sniper school to be 'conducted on the lines of an Army Sniper School in France'. This was, in large part, due to the success of the BEF's First Army School of Sniping under Major Hesketh Hesketh-Prichard.<sup>58</sup> To ensure that training remained up to date, the schools sought instructors with relevant experience and the ability to ensure that both military publications and the wider training syllabi were understandable to the student. Schools in the subsidiary theatres wanted instructors with 'recent experience in France', as well as those familiar with the latest literature from schools in the UK.<sup>59</sup> In the BSF, for example, a Regular RSM was brought over from France as 'Sergeant of Training' at the Infantry school,<sup>60</sup> while two instructors and three sergeant instructors were despatched from the Machine Gun Training Centre at Grantham to run the Lewis and Vickers Gun school.<sup>61</sup> The EEF was just as keen as its Salonika counterpart, requesting two regular officers from France to run the Senior Officers' school at Heliopolis.<sup>62</sup> Brigadier-General Walter Salmond (GOC Middle East Brigade, Royal Flying Corps) called for the attachment of a GSO 1 to help him 'keep in touch with progress at home and in France', but also to help 'coordinate methods of training out here with those at home'. For Salmond, the lack of expertise meant it was 'not possible to keep abreast of improvements in France... and this affects operations'.<sup>63</sup> The need for these experienced staff officers was clear in the EEF's appointment of three regular officers with experience of staff duties and instruction to run its Staff School at Mena House.<sup>64</sup> Of these three officers, two of them had been instructors at the junior staff school at Clare College, Cambridge, prior to their appointment to Mena House. The EEF Staff School, established in January 1917, was run on similar lines to the staff school in France with an intake of thirty students;<sup>65</sup> fifteen of these students were nominated by the BSF. As part of their participation on

---

<sup>56</sup> TNA, WO 95/4368, EEF GHQ War Diary, Memo to GOCs XX, XXI and DMC, 16 October 1917.

<sup>57</sup> TNA, WO 95/4367, EEF GHQ War Diary, 12 June 1917. E. Erickson, *Ottoman Army Effectiveness in World War 1: A Comparative Study* (London, 2007), pp.129-30.

<sup>58</sup> TNA, WO 95/4367, EEF GHQ War Diary, Lynden-Bell to GOC Eastern Force, 5 July 1917; H. V. Hesketh-Prichard, *Sniping in France 1914-18* (Solihull, 2000).

<sup>59</sup> TNA, WO 95/4367, EEF GHQ War Diary, 8 May 1917.

<sup>60</sup> TNA, WO 95/4946, BSF Infantry School War Diary, 10 January 1918.

<sup>61</sup> TNA, WO 95/4946, BSF Lewis and Vickers Gun School War Diary, 26 June 1918.

<sup>62</sup> TNA, WO 95/4367, EEF GHQ War Diary, 8 May 1917.

<sup>63</sup> TNA, WO 95/4367, EEF GHQ War Diary, Salmond to War Office, 8 March 1917.

<sup>64</sup> IWM, 90/1/1, Papers of Major-General Sir A. L. Lynden-Bell, Lynden-Bell to Maurice, 10 January 1917.

<sup>65</sup> TNA, WO 161/42, Letters of Brig-Gen E M Paul to Director of Fortifications and Works (War Office), Letter 19, 10 April 1917.

the course, the BSF candidates were taken 'to see something of the work on the eastern front'.<sup>66</sup> This gave them an appreciation of the situation facing the EEF and a grounding in the administrative requirements of fighting in the desert. A fortunate by-product of this mixed cohort was that it also allowed for students from different theatres to learn from each other.

The use of Western Front publications and instructors ensured that training schools and courses of instruction served as key fora for the practical dissemination of Western Front knowledge. This knowledge spread throughout the expeditionary forces through the army's use of cascade training or 'teach the teacher' systems.<sup>67</sup> Cascade training focuses on the training of a small group who then pass on what they know to others further down the organisation hierarchy. It allows for the dissemination of information through the ranks in a relatively short period of time.<sup>68</sup> Officers and men who attended formal schools were expected to cascade the information to their respective units either as an instructor or through less formal means such as lecturing. John Monash, for example, wrote that to keep up the supply of trained instructors in 3rd Australian Division, 'selected officers and NCOs do courses of from one to three weeks... and are then returned to their units to continue the training of the junior personnel';<sup>69</sup> while Brigadier-General Herbert Gordon (GOC 70th Brigade) decided to deliver a lecture to his men on his 'recent course with the French at Verona'.<sup>70</sup> Gordon's approach was recommended by SS152, which advised that 'lectures should be given on matters of interest by Officers recently returned from Schools, by Staff Officers and outside Lecturers when procurable'.<sup>71</sup> This suggests a greater emphasis on the individual as a way of sharing knowledge. Where possible, instructors from training schools would also visit formations to deliver lectures on the latest methods.<sup>72</sup>

Like training schools, lectures provided a good way of sharing knowledge as well as distilling the information found within military publications. The army recognised that 'subordinate commanders have not always the time or the inclination to study official books. This can to a large extent be remedied by lectures given by officers of all ranks'.<sup>73</sup> Often informal in nature, these lectures made the explicit information found within publications accessible to a larger group. Colonel Rory Macleod, an artillery officer serving in the IEF, practised this approach, making 'all the officers in this battery give lectures in the evenings. Each Officer has one subject, and he lectures on it once a week'.<sup>74</sup> This practice was important to the battery, as 'officers are quite keen on

---

<sup>66</sup> IWM, 90/1/1, Papers of Major-General Sir A. L. Lynden-Bell, Lynden-Bell to Maurice, 10 January 1917.

<sup>67</sup> This was practiced extensively in the German army. See Foley, 'Dumb Donkeys', p.290.

<sup>68</sup> J. Cheese, 'Cascading the Training', *Innovations in Education & Training International*, XXIII (1986), pp.248-52; R. L. Jacobs and D. Russ-Eft, 'Cascade Training and Institutionalizing Organizational Change', *Advances in Developing Human Resources*, III (2001), pp.496-503.

<sup>69</sup> AWM, 3DRL/2316 1/1, Papers of General Sir J. Monash, Monash to wife, 11 January 1917.

<sup>70</sup> TNA, WO 95/4239, 70 Brigade War Diary, 4 March 1918.

<sup>71</sup> GHQ, SS152, *Instructions for the Training of the British Armies in France*, 1917, pp.8-9.

<sup>72</sup> As well as lecturing to formations, instructors were often attached to front line units for short periods to ensure that their instruction was kept up to date. See G. H. Addison, *The Work of the Royal Engineers in the European War, 1914-19: Schools* (Uckfield, 2006), p.359; TNA, WO 95/4756, BSF GHQ War Diary, MGGS BSF to IGC BSF, 20 December 1916; TNA, WO 95/4367, EEF GHQ War Diary, Lynden-Bell to GOC Eastern Force, 17 May 1917.

<sup>73</sup> TNA, WO 95/4229, 23rd Division GS War Diary, Proceedings of a Conference held at Divisional Headquarters, 26 April 1918.

<sup>74</sup> National Army Museum (NAM), 8112-9, Papers of Colonel R. Macleod, 'An Artillery Officer in the First World War', n.d, p.192.

listening to what one of their number is saying'.<sup>75</sup> In the EEF, Captain Noel Drury recounted a 'very informal lecture by Gen F[rederick] A[ugustus] Greer, all of us sitting round in shirt sleeves, and smoking'.<sup>76</sup> The informality often found in these lectures was a welcome departure from the prescriptive syllabi of the training schools. As Macleod recalled, although he enjoyed the Senior Officers' course at GHQ IEF, he found that some of the syllabus was 'quite old' and covered principles he had already learned during initial training at Woolwich.<sup>77</sup>

### III. People

As seen with the use of lectures, the individual could play an important role in the sharing of knowledge. As Foley argues, informal, people-centred methods formed a central part of the army's learning process.<sup>78</sup> This aligned with the army's organisational culture, its amateur tradition, and the continuing importance of personalities and patronage. However, this approach to learning is not limited to the British army. Research into corporate workplace learning reveals that nearly two-thirds of work-related information comes from face-to-face meetings, mentoring, and apprenticeships.<sup>79</sup> The army recognised the importance of these 'on the job' methods through its promotion of secondment and attachment schemes.<sup>80</sup>

For the army, secondments facilitated the acquisition and dissemination of knowledge between theatres. Inter-theatre secondments were usually governed by the GHQs of the various expeditionary forces and were often in response to identified gaps in the force's knowledge base. The request for suitable instructors for training schools is a good example of this. The same can be said for both staff officers and individuals with specialist technical knowledge. As early as March 1916, Brigadier-General Philip Howell (BGS BSF) drew attention to the 'rapidly decreasing' proportion of staff officers with Staff College or specialist training. Howell suggested arranging 'permanent or temporary transfers' to widen the experience of new and existing officers.<sup>81</sup> Lieutenant-General Sir George Milne (CinC, BSF) was vocal in his support for secondments. In early 1918, Milne advocated 'an interchange of officers between Salonica [*sic.*] and the French and Italian fronts'. Lieutenant-Colonel Edward Plunkett, a liaison officer to the BSF, wrote how Milne believed that:

80% of the officers at Salonica would volunteer for service in France, while a large number of officers now in France would welcome a change to Salonica [...] There are many officers at Salonica with from

---

<sup>75</sup> Op. cit., p.192.

<sup>76</sup> NAM, 7607-69, Papers of Captain N. Drury, Memoirs – Vol. 3 Palestine, n.d., p.48.

<sup>77</sup> NAM, 8112-9, Papers of Colonel R. Macleod, 'An Artillery Officer in the First World War', n.d, p.213.

<sup>78</sup> Foley, 'Dumb Donkeys', pp.291-96.

<sup>79</sup> E. A. Smith, 'The Role of Tacit and Explicit Knowledge in the Workplace', *Journal of Knowledge Management*, V (2001), p.315; W. Swap, D. Leonard *et al.*, 'Using Mentoring and Storytelling to Transfer Knowledge in the Workplace', *Journal of Management Information Systems*, XVIII (2001), pp.95-114.

<sup>80</sup> The army also practiced this with its Commonwealth forces both pre-war and during the First World War. See R. A. Preston, 'The Military Structure of the Old Commonwealth', *International Journal*, XVII (1962), pp.98-121; D. Delaney, 'Mentoring the Canadian Corps: Imperial Officers and the Canadian Expeditionary Force, 1914-1918', *Journal of Military History*, LXXVII (2013), pp.931-53.

<sup>81</sup> TNA, WO 106/1347, Correspondence between BSF and Chief of the Imperial General Staff (CIGS), Howell to XII Corps, 1 March 1916.

10 to 20 years experience, and Lt-Gen Milne does not consider that the country is getting full value from the time and money spent on their military education.<sup>82</sup>

Having previously served as both an artillery and divisional commander on the Western Front, Milne realised that the nature and tempo of operations in France would invariably result in the most up to date methods. He favoured Western Front practice and the wider attachment system, endorsing the attachment of a number of his senior artillery officers to formations on the Western Front to 'study modern artillery methods' in June 1917.<sup>83</sup> This party included, amongst others, Major-General William Onslow (MGRA BSF), Brigadier-General Hugh White-Thomson (BGRA XII Corps), and Lieutenant-Colonel Philip Holbrooke, who later became the first counter-battery staff officer (CBSO) at XII Corps in August 1917.<sup>84</sup> By sending senior officers to the Western Front, Milne increased the likelihood that modern, Western Front artillery methods would disseminate throughout his force. Milne's decision to sanction these attachments may well explain the subsequent decision to trial a CBSO in XII Corps to 'carry out counter battery work as employed in France'.<sup>85</sup> CBSOs were established on the Western Front from January 1917 onwards – seven months earlier than in Salonika.<sup>86</sup> Sound ranging (SR) – a vital component of counter-battery work – was also pioneered and developed on the Western Front.<sup>87</sup> By November 1918, there were twenty-five SR groups on the Western Front and a handful scattered among the Italy, Palestine, and Salonika theatres.<sup>88</sup> To benefit from this new technology, the subsidiary theatres relied on the despatch of trained officers from France, or, alternatively, they were required to send their own officers for attachment and training on the Western Front.<sup>89</sup> It was only in January 1918 that SR was added to the establishment of the Field Survey Companies in Salonika. This suggests that, even with attachments, there could still be a considerable lag when importing Western Front practice and technology to other theatres.

In addition to lectures and secondments, the interpersonal relationships between individuals in the British army provided another method for learning. Modern management theory depicts the process of organisational learning as an iceberg. The small section above water covers formal learning, while the larger, submerged section represents informal learning.<sup>90</sup> The prevalence of informal learning can be attributed to the fact that individuals are often more likely to turn to each other, rather than documents, for information.<sup>91</sup> The use of

---

<sup>82</sup> TNA, WO 106/1347, Correspondence between BSF and CIGS, Plunkett to War Office, 17 January 1918.

<sup>83</sup> LHCMA, Box 3, Papers of Field Marshal Sir G. F. Milne, BSF War Diary, 23 June 1917.

<sup>84</sup> TNA, WO 95/4757, BSF GHQ War Diary, Cory to GOC XII Corps, 29 August 1917.

<sup>85</sup> TNA, WO 95/4757, BSF GHQ War Diary, Cory to GOC XII Corps, 29 August 1917.

<sup>86</sup> For consideration of counter-battery on the Western Front, see A. Palazzo, 'The British Army's Counter-Battery Staff Office and Control of the Enemy in World War I', *Journal of Military History*, LXIII (1999), pp.55-74; S. Marble, *British Artillery*, (Aldershot, 2013).

<sup>87</sup> See W. Van der Kloot, 'Lawrence Bragg's role in the development of sound-ranging in World War I', *Notes and Records of The Royal Society*, LIX (2005), pp.273-84; R. MacLeod, 'Sight and Sound on the Western Front: Surveyors, Scientists and the 'Battlefield Laboratory', 1915-1918', *War and Society*, XVIII (2000), pp.23-46.

<sup>88</sup> G. H. Addison, *The Work of the Royal Engineers in the European War, 1914-19 R.E.: The Organization and Expansion of the Corps, 1914-1918* (Uckfield, 2006), pp.18-19.

<sup>89</sup> Institute of Royal Engineers, *History of the Corps of Royal Engineers* (8 vols., Chatham, 2008) VI, p.126.

<sup>90</sup> F. Coffield, 'The structure below the surface: Reassessing the significance of Informal Learning', in F. Coffield, ed., *The Necessity of Informal Learning* (Bristol, 2000), p.1.

<sup>91</sup> For further discussion, see H. Mintzberg, *The Nature of Managerial Work* (New York, 1973); D. Z. Levin and R. Cross, 'The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer',

informal social networks allows individuals to circumvent often unwieldy formal systems, thus reducing the problem of knowledge lag.<sup>92</sup> Individuals, such as Philip Howell, took advantage of their own social networks to secure up-to-date publications prior to the army's decision to standardise distribution. Howell's pre-war relationship with Sir Douglas Haig resulted in the latter sending him 'some reports which may interest you, and [I] have also got [Lieutenant-General Sir Richard] Butler to make up a package of publications on training questions which might be of use to you'.<sup>93</sup>

Although a shared identity and culture bound together individuals within the army, the importance of informal networks to the working of the army cannot be overlooked.<sup>94</sup> Knowledge does not simply result from processes or activities; it comes from people and communities of people. There needs to be an element of connectedness between individuals for social networks to bear fruit. This connectedness could be through shared attendance at public school, Sandhurst, the Staff College, or through membership of other social groups such as hunts or gentlemen's clubs. In a letter to Alec Godley, for example, George Milne reminisced on the fortunes of his cohort at the Staff College, noting that:

...a good many of us who were at the S[taff] C[ollege] together seem to be fairly busy in the war. You, Robertson, Gough, Hunter Bunter, Braithwaite... and many others... We know little of the war in France and anxiously pick up all the crumbs we can.<sup>95</sup>

The tendency to focus on formal, hierarchical methods of learning has meant that the impact of these informal, lateral relationships has sometimes been overlooked. As these interactions are social and often ad hoc in nature, the process and outcome are very rarely written down. However, evidence of these interactions can be found in personal correspondence, particularly between senior officers. Like Milne, Stanley Maude (CinC, Indian Expeditionary Force D) was keen to keep in touch with Western Front developments during his time in Mesopotamia. Writing to his family, Maude noted that he was 'getting a good many letters now... from the War Office, and from Army, Corps and Divisional Commanders in France and Egypt'. This ensured that he was kept 'posted with what is going on there'.<sup>96</sup> Throughout the Gallipoli campaign, Henry Rawlinson was in regular

---

*Management Science*, L (2004), pp.1477-90; F. D. Schoorman, R. C. Meyer, and J. H. Davis, 'An Integrative Model of Organization Trust: Past, Present and Future', *Academy of Management Review*, XXXII (2007), pp.344-54.

<sup>92</sup> The use of informal networks to circumvent formal knowledge channels does pose greater problems for the organisation through lost knowledge. See O'Toole and Talbot, 'Fighting for Knowledge', pp.42-67; Foley, McCartney and Griffin, 'Transforming in contact', pp.253-70.

<sup>93</sup> LHCMA, 6/2, Private Papers of Brigadier P. Howell, Haig to Howell, 21 March 1916. Butler was deputy Chief of the General Staff at BEF GHQ and was responsible for supervising 'the training and the making of the Army'. See TNA, WO 256/14, Diaries of Field Marshal Sir Douglas Haig, Diary entry, 19 December 1916.

<sup>94</sup> For discussion of informal organisations, see Barnard, *The Functions of the Executive*, pp.122-3; F. J. Roethlisberger and W. J. Dickson, *Management and the Worker* (Cambridge MA, 1939).

<sup>95</sup> LHCMA, 3/180, Papers of General Sir A. Godley, Milne to Godley, 26 January 1916. At this time, Godley was GOC II Australian and New Zealand Army Corps (ANZAC), William Robertson was Chief of the Imperial General Staff (CIGS), Hubert Gough was GOC I Corps, Aylmer Hunter-Weston was GOC VIII Corps, and Walter Braithwaite was GOC 62nd (2nd West Riding) Division having formerly served as Chief of Staff, Mediterranean Expeditionary Force (MEF).

<sup>96</sup> Lieutenant-General Sir F. S. Maude, *The Military Papers of Lieutenant-General Sir F. S. Maude, 1914-1917* ed. A. Syk (Stroud, 2012), p.149.

communication with senior officers in the Mediterranean Expeditionary Force, including Braithwaite, Godley, and Ian Hamilton.<sup>97</sup> The correspondence between these men reveals discussions around the reasons for success or failure in the different theatres. In a letter to Clive Wigram (Private Secretary to King George V), Rawlinson wrote that he had:

heard from Braithwaite the other day describing the difficulties of the situation which confronts them – Achi Baba is not dissimilar to many of the fortified strongholds which confront us here so I sent him some of our experiences on the best way to deal with barbed wire and trenches.<sup>98</sup>

Rawlinson also sent reports and sketches to Godley, outlining how the divisions and corps on the Western Front were arranged to ensure that the troops were kept in ‘good fighting trim’.<sup>99</sup> A further example involved an exchange between Rawlinson and Philip Chetwode (GOC XX Corps) who were both Old Etonians and members of the Turf Club. It provides an illuminating example of the written learning relationship between theatres. Prior to the Beersheba operations in October 1917, Chetwode consulted Rawlinson over the difficulties of water supply in the Palestine theatre. The reply from Rawlinson was sensible enough: ‘Why don’t you do as I’ve done in my Army Area here? I’ve got nearly twenty miles of pipe lines laid down’. Chetwode smiled, remarking: ‘I must tell him... we’ve already got one hundred and fifty miles of pipe line’.<sup>100</sup> Knowledge was shared across boundaries, but logistical lessons were not always applicable given the poor existing transport infrastructure and hostile desert terrain of the Middle East.

Far from preventing these informal exchanges of information, the army tolerated and, in some cases, encouraged these discussions. The concepts of ‘clubbability’ and the ‘old school tie’ encompassed a variety of pre-existing social networks that overlaid the shared identity of service in the army. These concepts still held currency in Edwardian society and were exploited by the army with the establishment of officers’ and social clubs in the UK and abroad, such as The King George and Queen Mary Clubs and the AIF’s War Chest Club in London.<sup>101</sup> The value of these clubs was quickly realised by the army who used the clubs’ bulletin boards to post information and orders from the front.<sup>102</sup> The ‘old school tie’ further manifested through the numerous school, university, and regimental dinners that took place on all fronts during the war. These dinners were often advertised in the General Routine Orders of each expeditionary force and, while not envisaged as a way of sharing knowledge, still served to provide extra lubricant for the mechanics of socialisation.<sup>103</sup> The army also used its formal

---

<sup>97</sup> During the Gallipoli campaign, Rawlinson was GOC IV Corps, while Hamilton was CinC MEF.

<sup>98</sup> NAM, 5201-22-18, Papers of Lord Rawlinson, Letterbook 1915-16, Rawlinson to Wigram, 7 June 1915. I am grateful to Professor Gary Sheffield for pointing this out to me.

<sup>99</sup> NAM, 5201-33-18, Papers of Lord Rawlinson, Letterbook 1915-16, Rawlinson to Godley, 11 August 1915.

<sup>100</sup> G. E. Badcock, *A History of the Transport Services of the Egyptian Expeditionary Force, 1916-1917-1918* (London, 1925), p.313.

<sup>101</sup> See S. Cozzi, ‘“When You’re A Long Long Way From Home”: The Establishment of Canadian-only Social Clubs for CEF soldiers in London, 1915-1919’, *Canadian Military History*, XX (2011), pp.45-60; AWM, AWM25 1007/5, Correspondence relating to formation of AIF and War Chest Club, London, Anderson to Mrs Samuel, 14 August 1916.

<sup>102</sup> Cozzi, ‘Social Clubs’, p.46.

<sup>103</sup> See C. Moore-Bick, *Playing the Game: The British Junior Officer on the Western Front 1914-1918* (Solihull, 2011), pp.181-84. See also WO 123/293, General Routine Orders – Salonika Nos. 297 (15 January 1918), 330 (10 May 1918) and 331 (14 May 1918) for examples of ‘school dinner’ notices.



training schools to promote socialising and discussion. The object of the first Royal Engineers (RE) School of Instruction at Le Parcq, for example, was to 'enable officers from different parts of the line to exchange their experiences and methods, to their mutual advantage'.<sup>104</sup> The second RE School, which started at Blendecques in December 1917, built on the principles espoused at Le Parcq. However, unlike Le Parcq, officers at Blendecques 'came to know each other much better and consequently more discussion took place'.<sup>105</sup> This forum for discussion was not just reserved for attendees on the course. In connection with the school, several conferences of divisional Commanders Royal Engineers (CRE) were held under the presidency of an Army Chief Engineer, thus affording 'an invaluable opportunity for the exchange of ideas'.<sup>106</sup>

#### IV. Conclusion

Shaped by its pre-war attitude to learning, the British army shared knowledge among its operational theatres through a number of different media. In response to its rapid expansion and its increasing global commitments, the army was forced to develop a series of bureaucratic methods, including publications and training schools, to share knowledge between its expeditionary forces. It could no longer rely on a purely ad hoc, highly personalised approach to learning. As a result, forces were bombarded with the latest literature and tactics. However, owing to its organisational and learning culture, the army was reticent when it came to enforcing this literature. The dissemination of Western Front publications to the other theatres often came with a caveat around the 'considerable dissimilarity in conditions and methods'.<sup>107</sup> It was, therefore, for each force to discern the value of this information for use in-theatre. The various forces were not obliged to adhere to Western Front practice, suggesting that the army had not completely departed from its tendency towards decentralised decision-making. It was flexible enough to delegate responsibility to the periphery. Indeed, by focusing on the learning experience beyond the Western Front, this article has highlighted the depth and expanse of the army's learning process.

As both Foley and Beach have argued, the development of formal methods took time to mature. It took until February 1917 for the systematic dissemination of military publications to the subsidiary theatres, while the doctrine writing process behind those publications did not really mature until mid-1918.<sup>108</sup> The army recognised that it needed to invest in a series of methods to enhance its organisational learning experience. However, it could not favour formal over informal methods. In keeping with its highly personalised approach, the army actively encouraged a variety of 'people-to-people' methods for sharing knowledge, including secondments, whilst tolerating underlying informal social networks. These avenues were heavily influenced by the social and cultural affiliations that transcended the shared culture of the army. The army exploited these affiliations, working in conjunction with existing Edwardian social structures and using them as a means of increasing its learning potential. It clearly understood the benefits of networking and conversation as a way of sharing knowledge both in-theatre and between theatres. These informal methods were a legacy of the army's

---

<sup>104</sup> Addison, *Royal Engineers: Schools*, p.354.

<sup>105</sup> Op. cit., p.355.

<sup>106</sup> Op. cit., p.357.

<sup>107</sup> AWM, 3DRL/3376 11/12, Papers of Lord Birdwood, War Office to Birdwood, 5 December 1914.

<sup>108</sup> Beach, 'General Staff', p.492.

preference for pragmatic solutions. This suggests that, unwittingly or not, the army pursued a strategy of personalisation, supported by one of codification.<sup>109</sup>

Although the various expeditionary forces had their own tactical and geographical peculiarities, coupled with the inevitable differences in scale and tempo, the lessons and innovations from the Western Front were highly sought after. Training schools based their syllabi on Western Front publications and preferred instructors with ‘experience gained in France’. The army’s learning methods were effective in sharing knowledge among the theatres, as well as ensuring the successful establishment of a Western Front bedrock. This bedrock was propagated by senior officers and commanders in the British army who were willing to engage with the mass of literature produced in order to identify, assess, and, where required, adapt the learning process of the Western Front to suit conditions faced in their own theatres. Ultimately, success in the First World War was predicated upon the swift, efficient transfer of knowledge. The army had to develop and engage with both formal and informal methods to realise this knowledge transfer. Its desire to develop these mutually supportive methods suggests that the army had a greater awareness of the importance of organisational learning than hitherto thought.

---

<sup>109</sup> Hansen, Nohria and Tierney, ‘Strategy’, p.112.